January 14, 2010

Eric F. Pastor
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2201 Double Creek Drive, Suite 4004
Round Rock, TX 78664

Re: Gulfco Marine Maintenance Superfund Site, Freeport, Texas
Unilateral Administrative Order, CERCLA Docket No. 06-05-05
Draft Baseline Human Health Risk Assessment (BHHRA)

Dear Mr. Pastor,

The Environmental Protection Agency (EPA) and the Texas Commission on Environmental Quality (TCEQ) have performed a review of the above referenced document dated August 31, 2009. The enclosed comments shall be incorporated in the Final BHHRA and copies provided to the notification list within twenty (20) days of receipt of this letter.

If you have any questions, please contact me at (214) 665-8318, or send an e-mail message to miller.garyg@epa.gov.

Sincerely yours,

Gary Miller, P.E.
Remediation Project Manager

Enclosure

cc: Luda Voskov (TCEQ)
Dipanjana Bhattacharya
Barbara Nann

9340896

Gulfco Marine Maintenance Superfund Site, Freeport, Texas
Draft Baseline Human Health Risk Assessment (BHHRA)

General Comments:

1. An Executive Summary and a list of acronyms shall be included with the BHHRA.

2. All review comments shall be addressed in a response prior to or as an accompaniment to the final BHHRA.

3. Screening of chemical concentrations against their corresponding background values was performed in the Draft BHHRA. Chemicals detected at the site and deemed less than their corresponding site background concentration were not evaluated further in the Draft BHHRA. Background screening is a source of significant uncertainty in a risk assessment. Background screening shall not be conducted and chemicals shall not be eliminated without further analysis in the risk assessment. EPA guidance recommends, and the BHHRA shall include, a comparison to background, such as an evaluation of potential background risk in the uncertainty section.

4. Each medium was evaluated separately in the Draft BHHRA. Total risks for each receptor were not summed across media; thus, characterization of potential risk is not complete. Risk across media should be performed (EPA 1989, 2002) to allow the assessment of potential risks for each receptor of concern.

5. Information in the tables of the report was difficult to locate at times based on table format. Table formats shall be revised to follow the EPA-recommended table format (EPA 2002).

Specific Comments:

1. Section 2.2; pages 10-13: The discussion in Section 2.2 concerning the screening process is somewhat confusing. A diagram shall be included to clarify the process. This would save time and further confusion when the Record of Decision is written.

2. Section 2.2; page 10: The first paragraph appears to contain a misstatement where it indicates that compounds were eliminated from further consideration if…4) they were detected at a high concentration. The BHHRA shall be revised to clearly state that chemicals detected at high concentrations will be retained.

3. Section 2.2.2. page 12; and Appendix B: The background analysis was performed based on the calculation of 95-percent upper confidence limits (UCL) on the mean using the ProUCL program. The current version of ProUCL calls for the indication of non-detects in the input file and does not include these samples as detects in the calculations

(EPA 2009). The latest version of ProUCL shall be used and the non-detects should be treated appropriately.

4. Section 3.1.2; page 15: A clear and transparent discussion of the inhalation pathway is missing from the report. This shall be included and discussed since VOCs, SVOCs, and metals are COIs. Depending on climate and temperature variations, volatilization of chemicals and release of metal dust can make the inhalation exposure route complete.

5. Section 3.1.2; page 15: The BHHRA states "Thus, the only complete exposure pathway is the volatilization to indoor and outdoor air pathway in areas above impacted groundwater. A restrictive covenant requiring any building design to preclude vapor intrusion has been filed for Lots 55, 56, and 57 where VOC concentrations were measured in relatively high concentrations in Zone A groundwater. Nevertheless, this pathway was conservatively evaluated in the BHHRA." The text shall be expanded and include references from the tables so the reader can follow the logic. The text shall also describe which COIs exceeded screening levels and discuss the locations in reference to the residential and other potential receptor populations.

6. Section 3.1.4; pages 16-17: The BHHRA shall state in a clear manner why subsistence fishing was not considered for evaluation. Give justification why recreational fishing was the most conservative scenario for this site.

7. Section 3.1.4; page 17: A risk assessment that was performed for fish ingestion concluded that recreational fishing does not pose a threat due to exposure to the site; this risk assessment was accepted by EPA. The Draft BHHRA extends this assumption to shellfish ingestion. Although the exposure scenarios are comparable, the uptake and bioaccumulation by shellfish is not the same as in fish. The uncertainties with the lack of quantitative analysis of shellfish shall be discussed in the uncertainty section. Although a ban is in existence, it is not based on chemical concentrations in shellfish; therefore, it is important to properly assess shellfish concentrations and their potential risks to humans.

8. Section 3.2; page 18: The BHHRA states that "Given the frequently saturated nature of the wetlands sediment and the abundant vegetation on the uplands portion of the North Area, fugitive dust generation and VOC emissions, and off-site impacts were not considered." Abundant vegetation on the upland portion of the North area is not a competent existing physical control for preventing emissions to ambient air. The BHHRA shall be revised to evaluate the North area, in addition to the South Area, for off-site dust and VOC emissions.

9. Section 3.4.2; page 25: This section of the BHHRA indicates that TCEQ residential soil-to-air PCLs (30-acre) were used to evaluate off-site residential exposure to vapor and particulate from the South area. However, the actual PCLs used in Tables 23 and 24 for this evaluation ($^{Air}Soil_{Inh\text{-}V}$ PCLs) only consider vapor, and do not include contributions from particulate. TRRP $^{Air}Soil_{Inh\text{-}\boldsymbol{VP}}$ PCLs apply to commercial/industrial surface soil [0-5 feet below ground surface (bgs)], while $^{Air}Soil_{Inh\text{-}V}$ PCLs apply to

subsurface soils. There are more $^{Air}Soil_{Inh\text{-}VP}$ PCLs than $^{Air}Soil_{Inh\text{-}V}$ PCLs (e.g., metals), and residential $^{Air}Soil_{Inh\text{-}VP}$ PCLs are available in Table 6 at www.tceq.state.tx.us/remediation/ trrp/trrppcls.html. The SLERA shall include the $^{Air}Soil_{Inh\text{-}VP}$ PCLs to evaluate the inhalation pathway.

10. Section 4.4; page 29: The BHHRA shall include clarification regarding why the Regional Screening Levels (RSLs) were not used.

11. Sections 5.3 and 5.4, page 32: A full risk characterization calculation was not performed for the contact recreational and off-site residential scenarios. Instead, a ratio comparison to their respective PCLs was performed. Without calculating an actual potential risk, it is not possible to assess total risk for these receptors across media. Risk characterization calculations shall be performed for all potentially complete pathways.

12. Section 6; page 34: The BHHRA shall include a comparison of on-site data to background in the uncertainty section. Further, several assumptions made in the BHHRA shall be discussed as to their associated uncertainty. These include the lack of risk analysis for shellfish and the assumption that ground water does not discharge to surface water, as well as the limited chemical set for which analyses were run for several media.

13. Section 7; page 39: The conclusions section shall discuss each potential receptor and indicate if there is a concern for their exposure to the site. This cannot be performed until risks are summed for each receptor across media in order to assess a total potential risk for all exposure pathways.

14. Tables 1,2,8,and 9: In regard to Arochlor 1254 in these tables, please note that TCEQ has a commercial/industrial $^{Total}Soil_{Comb}$ PCL (30-acre) for PCBs of 7.1 mg/kg. The tables and BHHRA shall be revised to include this value for Arochlor 1254.

15. Tables 4, 11, and 12: The Intracoastal Waterway (ICWW) is tidal and so by definition is a sustainable fishery (§307.6(d)(5)(D)). The TSWQS salt water fish criteria apply, and the tables and BHHRA shall be revised to include these criteria. Regarding the wetlands, they are salt water wetlands. Per Table 3-1 of TRRP-24 guidance, salt water wetlands (both permanently inundated and not) need to meet the TSWQS salt water fish criteria, and the tables and BHHRA shall be revised to include these criteria. Regarding the two freshwater ponds, based on the available information, both of these ponds are perennial. Both appear to be less than 50 surface acres, and therefore would not be sustainable fisheries by definition (§307.6(d)(5)(C)). However, since they are perennial, they should be evaluated as incidental fisheries (§307.6(d)(6)), and the TSWQS salt water fish tissue values multiplied by 10 will apply, and the tables and BHHRA shall be revised to include these criteria.

REFERENCES

U. S. Environmental Protection Agency (EPA). 1989. *Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual (Part A) (Interim Final).* Report No. EPA/540/1-89/002. Office of Emergency and Remedial Response (OERR), Washington, DC. December.

EPA. 2002. *Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual (Part D).* OERR, Washington, DC. December.

EPA. 2009. ProUCL Version 4.0.04. Las Vegas Technical Support Center for Monitoring and Site Characterization. Software developed by EPA. Found at: http://www.epa.gov/esd/tsc/TSC_form.htm